

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A method of forming a powder compact comprising:
applying a higher fatty acid lubricant which is dispersed into water containing a
surfactant to an inner surface of a heated die which is heated to less than the melting point or
less of said higher fatty acid lubricant; and
filling metal powder into said die and compacting said metal powder under such a
pressure that said higher fatty acid lubricant is chemically bonded with said metal powder to
form a metallic soap coating which is different from said higher fatty acid lubricant.

Claim 2 (Previously Presented): The method of forming a powder compact of claim
1, wherein said higher fatty acid lubricant is a metal salt of a higher fatty acid.

Claim 3 (Previously Presented): The method of forming a powder compact of claim
2, wherein said metal salt of a higher fatty acid is a lithium salt, a calcium salt, or a zinc salt
of a higher fatty acid.

Claims 4-5 (Canceled).

Claim 6 (Previously Presented): The method of forming a powder compact of claim
1, wherein said higher fatty acid lubricant has a maximum particle diameter of less than
30 μm .

Claim 7 (Previously Presented): The method of forming a powder compact of claim 1,
wherein said heated die has a temperature of 100 °C or more.

Claim 8 (Canceled).

Claim 9 (Previously Presented): The method of forming a powder compact of claim 1, wherein said metal powder has been heated.

Claim 10 (Previously Presented): The method of forming a powder compact of claim 1, wherein said metal powder comprises iron powder.

Claim 11 (Previously Presented): The method of forming a powder compact of claim 1, wherein said metal powder further comprises said higher fatty acid lubricant.

Claim 12 (Previously Presented): The method of forming a powder compact of claim 10, wherein said metal powder further comprises said higher fatty acid lubricant.

Claim 13 (Previously Presented): The method of forming a powder compact of claim 11, wherein said metal powder comprises 0.1% or more by weight of said higher fatty acid lubricant.

Claim 14 (Currently Amended): A method of forming a powder compact comprising: applying a metal salt of higher fatty acid to an inner surface of a die heated to 100°C or more but less than the melting point of said metal salt of higher fatty acid; and charging iron powder into said die and compacting said iron powder at a pressure of 600 MPa or more,

wherein the higher fatty acid of said metal salt is chemically bonded with said iron powder to form a metallic soap coating which is different from said metal salt of higher fatty acid.

Claim 15 (Previously Presented): The method of forming a powder compact of claim 14, wherein said metal salt of a higher fatty acid is a lithium salt, a calcium salt or a zinc salt of a higher fatty acid.

Claim 16 (Previously Presented): The method of forming a powder compact of claim 14, wherein said iron powder is compacted at a pressure of 785 MPa or more.

Claim 17 (Currently Amended): A method of forming a powder compact, comprising: applying, to an inner surface of a die which has been heated to a die temperature of 100°C or more, a dispersion fluid in which a metal salt of a higher fatty acid having a higher melting point than said die temperature is finely dispersed, thereby forming a coating of said metal salt of a higher fatty acid;

filling iron powder into said die and compacting said iron powder under a compacting pressure of 600 MPa or more, thereby providing a compact having a metallic soap coating on a surface which is in contact with said die; and

ejecting and taking out said compact from said die,

wherein the higher fatty acid of said metal salt is chemically bonded with said iron powder to form a metallic soap coating which is different from said metal salt of higher fatty acid.

Claim 18 (Previously Presented): A method of forming a powder compact comprising:

applying, to an inner surface of a die which has been heated to a die temperature of 100°C or more, a dispersion fluid in which a metal salt of a higher fatty acid having a higher melting point higher than said die temperature is finely dispersed, thereby forming a coating of said metal salt of a higher fatty acid;

filling iron powder into said die and compacting said iron powder under a compacting pressure of 600 MPa or more, thereby providing a compact having a metallic soap coating on a surface which is in contact with said die; and

ejecting and taking out said compact from said die with an ejecting pressure of 3% or less of said compacting pressure.

Claim 19 (Previously Presented): The method of forming a powder compact of claim 17, wherein said compacting pressure is 686 MPa or more and said powder compact is removed from a die with an ejecting pressure of 8 MPa or less.

Claim 20 (Previously Presented): The method of forming a powder compact of claim 17, wherein said compacting pressure is 700 MPa or more and having an ejecting pressure of 15 MPa or less.

Claim 21 (Previously Presented): The method of forming a powder compact of claim 17, wherein said compacting pressure is 700 MPa or more and having an ejecting pressure of 13 MPa or less.

Claim 22 (Previously Presented): The method of forming a powder compact of claim 17, wherein said compacting pressure is 700 MPa or more and having an ejecting pressure of 10 MPa or less.

Claim 23 (Previously Presented): The method of forming a powder compact of claim 17, wherein said metal salt dispersed in said dispersion fluid has a maximum particle diameter of 30 μm or less.

DISCUSSION OF THE AMENDMENT

Claim 1 has been amended to require that the heated die be heated to less than the melting point of the higher fatty acid lubricant, as supported in the specification at paragraph [0057]. Claim 14 has been similarly amended, and to require that the higher fatty acid of the metal salt be chemically bonded with the iron powder to form a metallic soap coating which is different from the metal salt of higher fatty acid, thus being consistent with an analogous limitation in Claim 1. Claim 17 has been amended to contain the last-discussed limitation added to Claim 14.

No new matter is believed to have been added by the above amendment. With entry thereof, Claims 1-3, 6, 7, and 9-23 will remain pending in the application.